

What is claimed is:

1. A method of processing source image data for instructing an output device in providing an image having a plurality of pixels, each pixel forming a data set, the data set for each pixel having a predetermined number of data bits, the method comprising the steps of:

coupling image information to each pixel, the image information for each pixel including at least one additional data bit coupled to the data set of the pixel, the additional data bit having two states;

assessing the image information for each pixel; and

rendering one or more pixels of the image according to the image information coupled to each pixel.

2. The method of claim 1 in which the step of rendering the one or more pixels of the image further includes using a predetermined first rendering option to print the one or more pixels when the image information bit is in a first state.

3. The method of claim 2 in which the step of rendering the one or more pixels of the image further includes using a predetermined second rendering option different from the first, to print the one or more pixels when the image information bit is in a second state.

4. The method of claim 1 in which the source image data is derived from a graphics device interface (GDI) in a computer, the steps of coupling image information being carried out on the output of the GDI.

5. The method of claim 1 in which the step of rendering one or more pixels according to the image information is carried out in a print driver.

6. A method of processing source image data for instructing an output device in providing an image having a plurality of pixels, each pixel forming a data set, the data set for each pixel having a predetermined number of data bits, the method comprising the steps of:

- 5           coupling image information to each pixel, the image information for each pixel including at least two additional data bits coupled to the data set of the pixel;
- assessing the image information for each pixel; and
- rendering the pixels of the source image using an image rendering process
- 10       determined by the image information coupled to each pixel.

7. The method of claim 6 in which the image rendering process selected in the rendering step includes rendering the image using a selected halftoning process.

- 15       8. The method of claim 7 in which the halftoning process in the rendering step selected from the following: error diffusion and matrix thresholding.

9. The method of claim 6 in which the at least two additional data bits of the image information, when assessed, causes each pixel to be rendered using an
- 20       image rendering process selected from the following: monochrome pixel halftoning, text and edge pixel halftoning, color image pixel halftoning, and white.

10. The method of claim 6 in which the step of rendering the pixels of the source
- 25       image using an image rendering process further includes the step of:

              selecting a first halftoning process when the image information is in a first state,

              selecting a second halftoning process when the image information bit is in a second state,

selecting a third halftoning process when the image information is in a third state; and

selecting a fourth halftoning process when the image information is in a fourth state.

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11. An image rendering system for instructing a printer in providing an image having a plurality of pixels, the image data for each pixel being a pixel data set having a predetermined number of data bits, the source image data for the image including a plurality of pixel data sets, the image rendering system comprising:

10 a data storage device for temporarily storing the pixel data sets of the image,

associating software operatively coupled to the data storage device for associating one or more image information bits with each pixel data set in the data storage device; and

15 print processing means responsive to the pixel data sets and the image information bits associated with each pixel data set for rendering the pixels of the image using an image rendering process selected by the image information associated with each pixel data set.

20 12. The image rendering system of claim 11 in which the said associating software for associating the image information bits distinguishes between pixels of the following type: text pixels, edge pixels, monochrome pixels, and color pixels.

25 13. The image rendering system of claim 11 in which each pixel data set has a most significant bit and a least significant bit, the image information being coupled to a side of the pixel data set having a most significant bit.

14. The image rendering system of claim 11 in which each pixel data set has a most significant bit and a least significant bit, the image information being coupled to a side of the pixel data set having a least significant bit.

5 15. The image rendering system of claim 11 in which the source image comes from a computer, the computer including a print driver having a data storage means, software means, and a print processing means therein.

16. The image rendering system of claim 11 being disposed in a printer.

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17. The image rendering system of claim 11 being disposed in a printer controller.

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18. The image rendering system of claim 11 in which said print processor means further includes an image information coupling and assessment section responsive to the image information bits for selecting the image rendering process used in rendering the pixels of the image, and a pixel rendering section.

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19. The image rendering system of claim 18 in which the image information bits includes a first bit assessment block and two second bit assessment blocks, the first bit assessment block assesses a first image information bit and the two second bit assessment blocks assess a second image information bit.

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20. The image rendering system of claim 11 in which the image information comprises eight bits, at least one of the eight bits being associated with each pixel data set in the data storage device.